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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,526

03/09/2004

Michael Wurtz

842.005US2

1948

21186

7590

09/19/2007

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EXAMINER

OLANIRAN, FATIMAT O

ART UNIT

PAPER NUMBER

2609

MAIL DATE

DELIVERY MODE

09/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/796,526	Applicant(s) WURTZ, MICHAEL	
	Examiner Fatimat O. Olaniran	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
 4a) Of the above claim(s) 1-8, 11, 13-14, 17-20, 29-34, 38-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-12, 15-16, 21-28, 35-37, 41-60 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>All</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Some parts of the specification are inconsistent with the drawings for example,

Page 3 line 23 and line 24 "ANR driver 140"

Page 5 lines 5 and 7 "turn-off circuit 130a", line 9 "turn-on circuit 130b".

Page 5 line 11 "ANR driver 150"

Page 5 line 20 "microphone 130"

Page 7 line 6 "earcup 120", line 12 "earcup 110", line 12 and 15 "surface 130".

This list is not exhaustive; applicant must review specification to ensure that the specification is consistent with the drawings.

Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thornton*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

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be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 9-12, 15-16, 21-28, 35-37, 41-60 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6704428. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

Application claim 9 and patent claim 1 are both drawn to the same invention. These claims differ in scope in that application claim 9 is broader in scope than patent claim 1.

Allowance of application claim 9 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 1. Therefore obvious type double patenting is appropriate.

Claim 10 corresponds to patent claim 1.

Claim 12 corresponds to patent claim 1.

Application claim 15 and patent claim 1 are both drawn to the same invention. These claims differ in scope in that application claim 15 is broader in scope than patent claim 1.

Allowance of application claim 15 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 1. Therefore obvious type double patenting is appropriate.

Claim 16 corresponds to patent claim 2.

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Application claim 21 and patent claim 7 are both drawn to the same invention.

These claims differ in scope in that application claim 21 is broader in scope than patent claim 7.

Allowance of application claim 21 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 7. Therefore obvious type double patenting is appropriate.

Claim 22 corresponds to patent claim 8.

Claim 23 corresponds to patent claim 9.

Application claim 24 and patent claim 10 are both drawn to the same invention.

These claims differ in scope in that application claim 24 is broader in scope than patent claim 10.

Allowance of application claim 24 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 10. Therefore obvious type double patenting is appropriate.

Claim 25 corresponds to patent claim 11.

Claim 26 corresponds to patent claim 12.

Claim 27 corresponds to patent claim 10.

Claim 28 corresponds to patent claim 10.

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Application claim 35 and patent claim 3 are both drawn to the same invention. These claims differ in scope in that application claim 35 is broader in scope than patent claim 3.

Allowance of application claim 35 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 3. Therefore obvious type double patenting is appropriate.

Claim 36 corresponds to patent claim 3.

Claim 37 corresponds to patent claim 4.

Application claim 41 and patent claims 3 are both drawn to the same invention. These claims differ in scope in that application claim 41 is broader in scope than patent claims 3.

Allowance of application claim 41 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 3. Therefore obvious type double patenting is appropriate.

Claim 42 corresponds to patent claim 3.

Claim 43 corresponds to patent claim 3.

Claim 44 corresponds to patent claim 3.

Claim 45 corresponds to patent claim 3, 10, 11 and 13.

Claim 46 corresponds to patent claim 7.

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Application claim 47 and patent claims 3 are both drawn to the same invention. These claims differ in scope in that application claim 47 is broader in scope than patent claims 3.

Allowance of application claim 47 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claims 3. Therefore obvious type double patenting is appropriate.

Claim 48 corresponds to patent claim 3

Claim 49 corresponds to patent claim 3, 10, 11 and 13.

Claim 50 corresponds to patent claim 3.

Application claim 51 and patent claim 3 are both drawn to the same invention. These claims differ in scope in that application claim 51 is broader in scope than patent claim 3.

Allowance of application claim 51 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 3. Therefore obvious type double patenting is appropriate.

Claim 52 corresponds to patent claim 3.

Claim 53 corresponds to patent claims 3.

Claim 54 corresponds to patent claims 3,10, 11 and 13.

Claim 55 corresponds to patent claim 3.

Claim 59 corresponds to patent claim 3.

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Application claim 56 and patent claim 10 are both drawn to the same invention. These claims differ in scope in that application claim 56 is broader in scope than patent claim 10.

Allowance of application claim 56 would result in an unjustified time wise extension of the monopoly granted for the invention defined by patent claim 10. Therefore obvious type double patenting is appropriate.

Claim 57 corresponds to patent claim 10.

Claim 58 corresponds to patent claim 10 and 3.

Claim 60 corresponds to patent claim 10.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 9-10, 12, 15, 35-36, 41-42, 46, 56- 58,60 are rejected under 35

U.S.C. 102(e) as being anticipated by Jones (6118878).

Claim 9 Jones discloses apparatus having at least two operating states (abstract line 21-25) and comprising: one or more earcups (col. 4 line 8-9); means for sensing acoustic energy based on user movements (col.16 line 41-45); and means responsive

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to a perceived absence of the acoustic energy for switching between the operating states (col. 17 line 13-15).

Claim 10 Jones discloses, wherein the acoustic energy is inaudible (col.16 line 41-45).

Claim 12 Jones discloses, wherein one of the two operating states is an on state and the other is an off or standby state, and wherein the means for switching is responsive to the sensed condition to switch from the on state to the off or standby state (col. 17 line 13-15).

Claim 15 Jones discloses, apparatus having at least two operating states (abstract line 21-25) and comprising: one or more earcups (col. 4 line 8-9) circuitry for sensing a condition (col.16 line 41-45) based on user jaw movements or blood movement within a user's head (Blood inherently moves in the head of a living person due to the presence of arteries. The pumping of blood produces an inaudible signal that can be picked up by a microphone as is routinely done with a stethoscope) and circuitry for changing the operating state of the headset from an on state to an off state in response to a perceived absence of the condition (col. 17 line 13-15).

Claim 35 Jones discloses at least one audio transducer for placement adjacent an ear of a user (col. 19 line 36); a bandpass filter, responsive to operation of the one audio transducer (col. 19 line 41-43), to provide an output that is indicative of a user wearing

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at least a portion of the apparatus and a switch responsive to a perceived absence of the output that is indicative of the user wearing at least a portion of the apparatus for switching ANR circuitry from an active state to an inactive state (col. 20 line 4-7 "...switching transistor 1307...").

Claim 36 Jones discloses a threshold detector operatively coupled between the bandpass filter and the switch (col. 19 line 41-43 bandpass filter, col. 48-49 comparator and switch).

Claim 41 Jones discloses a bandpass filter responsive to operation of a microphone to provide a first output based on acoustic energy produced by a user of the apparatus (col. 19 line 41-43); and a switch responsive to the first output to switch ANR circuitry from an active operating state to an inactive operating state (col. 20 line 4-7 "...switching transistor 1307...").

Claim 42 Jones discloses a threshold detector responsive to the first output of the bandpass filter to provide a second output, wherein the switch is responsive to the second output (col. 19 line 41-43 bandpass filter, col. 20 line 4-7 comparator and switch).

Claim 46 Jones discloses wherein the acoustic energy produced by the user is based on blood flow (col.16 line 41-45).

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Claim 56 Jones discloses, automatically determining whether acoustic signals produced by a user of the ANR circuitry are present within a cavity associated with the circuitry (col. 15 line 31-32 and col. 16 line 41-42); and automatically turning off the ANR circuitry in response to determining that the acoustic signals produced by the user are no longer present (col. 20 line 4-7).

Claim 57 Jones discloses, wherein the acoustic signals produced by the user are based on user blood flow (col.16 line 41-45).

Claim 58 Jones discloses, wherein automatically determining whether acoustic signals produced by the user are present comprises: producing a first output in response to operation of a microphone; filtering the first output to produce a filtered output (col. 19 line 41-43) and determining based on magnitude of the filtered output whether the acoustic signals produced by the user are present (col. 19 line 41-43 bandpass filter, col. 20 line 4-7 comparator and switch).

Claim 60 Jones discloses, wherein the cavity is at least partly defined by an earcup (col. 8 line 21-23).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16, 21-28, 43, 47-48, 50-51, 53, 55, 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Lucey (5396551).

Claim 16 Jones does not disclose, wherein the predetermined period of time is at least one minute and the circuitry for changing comprises analog circuitry.

Lucey discloses wherein the predetermined period of time is at least one minute and the circuitry for changing comprises analog circuitry (col. 1 line 54-55, Fig. 4). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

Claim 21 Jones discloses, an apparatus comprising: one or more earcups (col. 4 line 8-9); a microphone for sensing acoustic energy produced by user movement (col. 16 line 41-45); and a switch responsive to the timer for switching ANR circuitry from an active state to an inactive state (col. 19 line 48-49 and col. 20 line 4-7). Jones does not disclose a timer for determining whether the acoustic energy is absent for at least a predetermined amount of time.

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Lucey discloses a timer for determining whether the acoustic energy is absent for at least a predetermined amount of time (col. 1 line 54-55). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

Claim 22 analyzed with respect to claim 21, Jones further discloses a threshold detector; and a microprocessor coupled to the threshold detector and to the switch (col. 21 line 25-27).

Claim 23 analyzed with respect to claim 21, Lucey further discloses wherein the predetermined amount of time is at least one minute (col. 4 line 11, "...two minutes...").

Claim 24 Jones discloses determining whether acoustic energy produced by the user has been sensed by the audio transducer (col.16 line 41-45); and switching at least a portion of the ANR circuitry from an active state to an inactive state in response to a determination that the acoustic energy has not been sensed (col. 19 line 48-49 and col. 20 line 4-7). Jones does not disclose for at least a predetermined amount of time.

Lucey discloses for at least a predetermined amount of time (col. 4 line 11, "...two minutes..."). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

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Claim 25 analyzed with respect to claim 24, Jones in view of Lucey discloses wherein the acoustic energy is inaudible (Jones; col.16 line 41-45) and the predetermined amount of time is at least one minute (Lucey; col. 4 line 11, "...two minutes...").

Claim 26 analyzed with respect to claim 24, Jones further discloses wherein the apparatus includes an ANR driver (col. 13 line 2 switches 414, 416) and wherein the method further comprises switching the ANR circuitry from the inactive state to the active state in response to sensing deflection of a portion of the ANR driver (col. 13 line 2-6).

Claim 27 analyzed with respect to claim 24, Jones discloses wherein the acoustic energy is produced by user blood flow (col.16 line 41-45).

Claim 28 analyzed with respect to claim 24, Jones discloses wherein switching at least a portion of the ANR headset from an active state to an inactive state in response to a perceived absence of the condition (col. 19 line 48-49 and col. 20 line 4-7). Jones does not disclose starting timer in response to sensing the condition, with the timer configured to expire after measuring the predetermined amount of time; and switching at least the portion of the ANR headset from the active state to the inactive state in response to expiration of the timer.

Lucey discloses starting timer in response to sensing the condition, with the timer configured to expire after measuring the predetermined amount of time (col. 1 line 54-

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55); and switching at least the portion of the ANR headset from the active state to the inactive state in response to expiration of the timer (col. 2 line 2-8). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

Claim 43 analyzed with respect to claim 41, Jones does not disclose a timer responsive to the first output to control operation of the switch.

Lucey discloses a timer responsive to the first output to control operation of the switch (col. 2 line 2-8). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

Claim 47, Jones discloses a filter responsive to operation of a microphone to provide a filter output based on acoustic energy produced by a user of the apparatus; (col. 19 line 41-43); a threshold detector responsive to the filter output to provide a detector output (col. 19 line 41-43);

a switch responsive to the control signal to switch ANR circuitry from an active operating state to an inactive operating state (col. 19 line 48-49 and col. 20 line 4-7).

Jones does not disclose a timer responsive to the detector output to start a timing period and responsive to completion of the timing period to produce a control signal.

Lucey discloses a timer responsive to the detector output to start a timing period and responsive to completion of the timing period to produce a control signal (col. 4 line 9-

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12). Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to have to conserve power more efficiently.

Claim 48 analyzed with respect to claim 47, Jones further discloses, wherein the filter output is based substantially on acoustic energy produced by a user of the apparatus when the user is wearing at least a portion of the apparatus (col. 16 line 42-45).

Claim 50 analyzed with respect to claim 47, Jones further discloses wherein the acoustic energy produced by the user is based on blood flow (col. 16 line 41-45).

Claim 51 Jones discloses a switch for switching ANR circuitry from an active operating state to an inactive operating state (col. 19 line 48-49 and col. 20 line 4-7). Jones does not disclose, a timer, responsive to disengagement of at least a portion of the apparatus with or from a user, for controlling status of the switch.

Lucey discloses a timer, responsive to disengagement of at least a portion of the apparatus with or from a user, for controlling status of the switch (col. 4 line 9-12).

Therefore it would be obvious to one ordinarily skilled in the art to modify the power control circuitry of Jones with the timer circuit Lucey in order to conserve power more efficiently.

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Claim 53 analyzed with respect to claim 51, Jones further discloses a bandpass filter responsive to operation of an ANR microphone to provide an output based substantially on acoustic energy produced by the user (col. 19 line 41-43).

Claim 55 analyzed with respect to claim 53 and claim 51, Jones discloses wherein the acoustic energy produced by the user is based on blood flow (col.16 line 41-45).

Claim 59 analyzed with respect to claim 52, Jones in view of Lucey further discloses wherein automatically turning off the ANR circuitry in response to determining that the acoustic signals are no longer present (Jones; col. 20 line 4-7). Lucey discloses initiating a time measurement in response to an affirmative determination that acoustic signals produced by the user are present and in response to the time measurement indicating passage of at least a predetermined amount of time (Lucey; col. 4 line 9-12).

8. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Lucey (5396551) in further view of Filliman (4045748).

Claim 37 analyzed with respect to claim 35, Jones in view of Lucey discloses wherein the switches the ANR circuitry from the active state to the inactive state in response to a perceived absence of the output (Jones; col. 20 line 4-7) for a predetermined time of at least one minute (Lucey; col. 4 line 11). Jones in view of Lucey does not disclose wherein the bandpass filter comprises analog circuitry.

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Filliman discloses wherein the bandpass filter comprises analog circuitry (Fig. 2; component 22). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuitry of Jones with the timer of Lucey and the filter of Filliman in order to perform signal analysis without converting the input waveform to a digital waveform and in order conserve power efficiently.

9. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Cannelli et al (5072415).

Claim 44 analyzed with respect to claim 41, Jones does not disclose, wherein the timer comprises programmable means for outputting a control signal to the switch after passage of a predetermined amount of time.

Cannelli discloses, wherein the timer comprises programmable means for outputting a control signal to the switch after passage of a predetermined amount of time (col. 6 line 27-28). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the power control circuitry of Jones with the programmable timer circuit of Cannelli in order to have a circuit that can conserve power efficiently.

10. Claims 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Filliman (4045748) in further view of Cabot (5089981).

Claim 45 analyzed with respect to claim 41, Jones does not disclose wherein the bandpass filter comprises analog circuitry that defines a passband of 1-5 Hertz.

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Fillman discloses wherein the bandpass filter comprises analog circuitry (Fig. 2; component 22). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the filter of Jones with the analog circuitry of Fillman so as not to require an analog to digital converter as part of the circuitry. Jones in view of Fillman does not disclose a passband of 1-5Hertz.

Cabot discloses a passband of 1-5 Hertz (col. 4 line 31-32). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuit of Jones in view of Fillman with the passband of Cabot in order to have better frequency selectivity.

11. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Lucey (5396551) in further view of Cannelli et al (5072415).

Claim 52 analyzed with respect to claim 51, Jones in view of Lucey does not disclose, wherein the timer comprises programmable means for outputting a control signal to the switch after passage of a predetermined amount of time.

Cannelli discloses wherein the timer comprises programmable means for outputting a control signal to the switch after passage of a predetermined amount of time (col. 6 line 27-28). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the power control circuitry of Jones with the programmable timer circuit of Cannelli in order to have a flexible circuit that can conserve power efficiently.

12. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Lucey (5396551) in further view of Cannelli et al (5072415) in further view of Filliman (4045748) in further view of Cabot (5089981).

Claim 49 analyzed with respect to claim 47, Jones in view of Lucey disclose the threshold detector comprises analog circuitry and the switch comprises a transistor.

Jones in view of Lucey does not disclose wherein; the timer comprises a processor; the filter comprises analog circuitry that defines a passband of 1-5 Hertz.

Cannelli discloses the timer comprises a processor (col. 6 line 27-28). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuit of Jones in view of Lucey with the processor of Cannelli in order to have a circuit that can be implemented on a chip.

Jones in view of Lucey and Cannelli does not disclose the filter comprises analog circuitry that defines a passband of 1-5 Hertz.

Cabot discloses a passband of 1-5 Hertz (col. 4 line 31-32). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuit of Jones in view of Lucey and Cannelli with the passband of Cabot in order to have better frequency selectivity.

Jones in view of Lucey and Cannelli and Cabot does not disclose wherein the filter comprises analog circuitry.

Filliman discloses wherein the filter comprises analog circuitry.

Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuit of Jones in view of Lucey and Cannelli, and Cabot with

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the analog circuitry of Fillman in order to have a circuit that does not require an analog to digital converter.

13. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (6118878) in view of Lucey (5396551) in further view of Cabot (5089981).

Claim 54 analyzed with respect to claim 53 and claim 51, Jones in view of Lucey does not disclose wherein the bandpass filter has a passband of 1-5 Hertz.

Cabot discloses wherein the bandpass filter has a passband of 1-5 Hertz (col. 4 line 31-32). Therefore it would be obvious to one ordinarily skilled in the art at the time the invention was made to modify the circuit of Jones with the passband of Cabot in order to have a narrow bandwidth filter and greater frequency resolution.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fatimat O. Olaniran whose telephone number is 571-270-3437. The examiner can normally be reached on M-F Alt F off 8:30-6 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Tran can be reached on 571-272-7305. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FO


HAITRAN
PRIMARY EXAMINER